Abstract

A method of automatically determining one or more sensor locations for sensing a surface of a physical part includes a CAD model (12) and a sensor model (14). The CAD model (12), which is representative of the surface of the physical part, and the sensor model (14), which is representative of a 3-D image capturing sensor (22), are both input into a sensor planner (16). The sensor planner (16) subdivides the CAD model (12) of the physical part into a plurality of discrete partitions. The plurality of discrete partitions are grouped into one or more subgroups based on visibility criterion. The sensor planner (16) then automatically outputs a set of viewing positions (18) and orientations for the sensor (22).